We claim:



- 1. A steel processing material comprising:
 - (a) dried post combustion material (PCM), and
 - (b) slag foaming material.
- 2. The steel processing material of claim 1 wherein the slag foaming material comprises about 90% coal and about 10% dolomitic stone.
- 3. The steel processing material of claim 1 comprising about 5% to about 30% of the dried PCM.
- 4. The steel processing material of claim 1 wherein the dried PCM comprises less than about 2% water.
- 5. The steel processing material of claim 1 wherein the dried PCM is of an injectable particle size, has an average particle size sufficiently small to allow injection of the PCM into the heat of steel.
- 6. The steel processing material of claim 1 wherein the dried PCM has maximum particle not greater than about 5/16 of an inch.
- 7. The steel processing material of claim 1 wherein the dried PCM comprises about 30% to about 55% Fe.
 - 8. A method of preparing a steel processing material comprising:

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(a) process; and

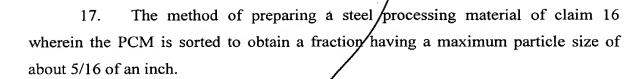
(b) drying the PCM.

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- 9. The method of preparing a steel processing material of claim 8 wherein drying is conducted in a screw auger dryer.
- 10. The method of preparing a steel processing material of claim 9 wherein the screw auger dryer comprises an induction heater.
- . 11. The method of preparing a steel processing material of claim 9 further comprising sorting the PCM to obtain a fraction having an average particle size processable by the screw auger prior to drying.
- 12. The method of preparing a steel processing material of claim 11 wherein PCM is sorted to obtain a fraction having a particle size of about 3/4 of an inch.
- 13. The method of preparing a steel processing material of claim 8 wherein the drying is conducted in a rotary dryer.
- 14. The method of preparing a steel processing material of claim 8 wherein drying the PCM comprises drying the PCM to not greater than about 2% water content.
- 15. The method of preparing a steel processing material of claim 8 wherein drying the PCM comprises air drying the PCM to about 6% to about 8% water content.
- 16. The method of preparing a steel processing material of claim 8 further comprising sorting the PCM to obtain a fraction having an average particle size processable by an injection gun.

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- 18. The method of preparing a steel processing material of claim 8 further comprising conveying the dried PCM to a first container.
- 19. The method of preparing a steel processing material of claim 8 further comprising mixing the dried PCM with a slag foaming material.
- 20. The method of preparing a steel processing material of claim 19 wherein mixing is conducted by adding the dried PCM and concurrently slag foaming material into a container.
 - 21. A method of preparing a steel processing material comprising:
 - (a) recovering dry post combustion material (PCM) from a steel making process; and
 - (b) mixing the PCM with a slag/foaming material.
 - 22. A method of manufacturing steel comprising:

(a) melting a first heat of steel comprising a liquid steel portion and a foamy slag wherein the melting generates a post combustion material (PCM);

(b) drying the PCM; and

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- 23. The method of manufacturing steel of claim 22 wherein the PCM is recovered from the first heat.
- 24. The method of manufacturing steel of claim 22 further comprising mixing the dried PCM with a slag foaming material before the dried PCM is added to the second heat of steel.
- 25. The method of manufacturing steel of claim 23 wherein the adding of the dried PCM into a second heat of steel comprises injecting the dried PCM with an injection gun.
 - 26. A steel processing material comprising:

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- (a) / a dry recycled material; and
- (b) a slag foaming material.
- 27. The steel processing material of claim 26 wherein the material is post combustion material, bag house dust, scale, or iron fines.
- 28. The method of manufacturing steel of claim 23 wherein the steps of melting, drying and adding are repeated until the concentration of heavy metals in the PCM reaches a set point.
- 29. The method of manufacturing steel of claim 28 further comprising sending the PCM to a reclamation process once the concentration of heavy metals in the PCM reaches the set point.

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